

ABSTRACT OF THE DISCLOSURE

Discharge at a high current density has been difficult because of problems that an electrolytic solution has low conductivity and absorption and desorption reaction of lithium ions are slow in the negative electrode.

However, let a (mAh) be a cell capacity when the organic electrolyte capacitor in a charged state is discharged to half the charging voltage over 1 ± 0.25 hours, and b (mAh) be a negative electrode capacity when the negative electrode in the charged state is discharged to 1.5 V (Li/Li⁺), then, by controlling a ratio of a positive electrode active material and a negative electrode active material to satisfy $0.05 \leq a/b \leq 0.30$, it is possible to achieve a high-performance organic electrolyte capacitor having a small internal resistance and a small change in internal resistance during charging and discharging as well a high output density, in which lithium ions are allowed to move with ease.